



REMARKS

Reconsideration and reexamination of this application is respectfully requested.

The Examiner has required that a substitute specification and claims be filed to correct typographical errors and punctuation errors. Accordingly, the substitute specification and amended claims are enclosed.

The Examiner has objected to the word "audial" in the claims stating that it is "unclear, inexact, or verbose" for the purposes of the examination, audial has ben interpreted as meaning audible.'

The Applicant submits: the American Heritage Dictionary defines "audial" as "Of or relating to the sense of hearing". "Audible" is defined as "that is heard or that can be heard."

In searching for an adjective to define "means" in the claim, it is submitted that the term "audial" is a better word than "audible" The adjective, "audial" was used as a shorthand name for the " means for detecting the direction of a source of sound". By attaching the word "audial" there is no need in later claims to identify the "audial means" by the "verbose" expression, "means for detecting the direction of a source of sound"

Claims 1 - 16 were originally in the application.

Claims 1-6, 9-16 were rejected.

Claims 17 and 18 are added by this response.

Claims 7, 8 have been allowed.

#### OBJECTIONS TO THE CLAIMS:

The Office Action has rejected claims 9, 12 stating that the specification does not provide enablement for the unidirectional lens, omnidirectional detectors and power means.

Claim 9 has been amended by deleting the term "omnidirectional".

Regarding claim 9, the specification has been amended to show the distance D as being the distance between the detectors. 50, 52.

Claim 9 does not contain the words, "omnidirectional detector" nor "power means".

With regard to claim 12, the power supply was aluded to but not shown as being necessary to power the microphones. In view of the Office Action, the specification and drawing, fig. 6 have been amended to show the power supply.

However, since the Examiner states that the power means requires further support in the specification, fig. 6 has been amended to show the "power means 71" connected to the console of switches.

The right to amend the drawing and specification is based on MPEP 706.03 (O):

"If subject matter capable of illustration is originally claimed and it is not shown in the drawing, the claim is not rejected but the Applicant is required to add it to the drawing."

#### REJECTION UNDER 35 USC 102

The Office Action has rejected claim 1, 10, 11, 14, 15, 16 of the original claims under 35U.S. C. 102(b) as being anticipated by U.S.P.N 5594494 to Okada et al. The Office Action rejected claim 6, 12, 16 under 35 U.S. C 103 as being obvious under Okada in view of Geng,

The Examiner states, in part, "the reference discloses:

'a picture estimation coding section 10") arranged in operable combination with said audial means --- for selecting a portion of said image signal generated from an area (see col. 3, lines 15- 17 for presenting an image of said area (see col. 3, lines 50-53, "picture data") of said area ("conference room") containing said source of sound (audio signals").

Okada states:

"Fig. 2 shows a schematic layout of a conference room containing a picture coding apparatus of the invention. In the figure, a single camera covers three persons at the conference." (col. 3, lines 15-17)

The image memory 16 temporarily holds the picture data in screens obtained by converting the video signal from the television camera 12 into digital form. The image memory has a capacity enough to store a plurality of pictures of pictures for image processing and updates the pictures constantly. The sound source position estimating section 13 estimates the position of the sound source on the basis of the audio signals. The estimation is stored in the sound source position information storage section 14.

Using the latest sound source position information stored in the sound source position information storage section 14, the picture coding section specifies the area corresponding to the sound source position in the video image on the screen, encodes the area with the coded bit rate  $M(j)$  and the other areas with the coded bit rate  $M(O)$  and transmits the coded signal. This enables the speaker among the persons who are present at the conference to be displayed at a high resolution on a monitor on the reception side.

The Applicant submits:

The present invention DOES NOT  
, encode the area with the coded bit rate  $M(j)$  and the other areas with the coded bit rate  $M(O)$  and transmits the coded signal.

The present invention does NOT contain means for "displaying the speaker at a higher resolution than the other speakers". In order to transmit the image signal to a remote receiver. The Okada reference discloses displaying an ENTIRE scene wherein a portion of the entire scene is presented in greater resolution than the rest of the scene in order to distinguish that portion from the rest of the scene. The objective of the Okada invention is to be able to transmit the entire signal including the unimportant area at a faster bit rate.

Instead, the present invention displays only a portion of the 360° field of view selected from the entire field of view that includes the source of sound and disregards image data representing the rest of the field of view. The advantage of the applicant's invention is that the image of the area of interest is inherently larger than the same area shown in Okada's invention (assuming the same screen size in both inventions.) This statement is implicit in the following paragraph taken from page 7 of the specification.

An address register 36 registers the address of the closest detector 30A and ignores the signals from the remaining audial detectors 32. The registered address is applied to display control circuit 38. The visual display circuit 38 selects the visual data from the corresponding address in the video memory 40 and displays an image of the location on the system monitor 42.

In other words, the present invention has the advantage of displaying the selected portion of the field of view on the ENTIRE SCREEN whereas the Okada invention squeezes the selected portion into a smaller area of the (same size) screen along with the less significant area. The result is that the Applicant's invention enables the viewer to see a larger view of the object of interest

The difference in construction between Okada and the Applicant's invention is that Okada subjects his image signal to an encoding circuit that changes bit rate whereas the Applicant's invention subject's his image data to a selecting circuit that separates out the data of interest for display and discards (ignores) the remaining data.

Another distinction between the Applicant and Okada presented in claims 17, 16 disclose a novel technique for "zeroing" in on the position of the source of sound.

The technique is to cause the signal received in the detector closest to the source of sound to deactivate all of the other audial detectors

This inherently improves the sensitivity of the system by reducing the electrical "noise" of the system. The technique is particularly effective where there are a large number of audial detectors,

Another scenario is a conference. When one conferee is talking, all of the other microphones are deactivated and remain deactivated until the speaker is finished talking.

To reinforce the Applicant's desire to forestall rejection, the attention of the Examiner is respectfully directed to MPEP 2131.

1. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single art reference.--- Verdegaal Bros. V. Union Oil co. of California, 814 F2d 628, 631, 2 USPQ2d 1051, 1053 (Fed Cir. 1987)

NOTE: Okada does NOT disclose the capability to select a limited portion of the image data from a 360o panoramic image signal and show ONLY that portion of the image on the screen.

2. Under 35U.S.C.102, the claim is anticipated by the reference, No question of obviousness is present. In other words for anticipation under 35 U.S.C. 102 the reference must teach every aspect of the claimed invention either explicitly or impliedly.

3.. "The identical invention must be shown in as complete detail as is contained in the claim:--Richardson vs. Suzuki Motor Co. 868 F2d 1226 1236 8 USPQ2d 1913, 1920 (Fed. Cir. 1989)

The Applicant further states, that, according to the MPEP, in order to support a rejection under 35 USC 103 based on two references, each of the elements of the rejected claim must be found in either one of the references. AND--

The motivation for combining these references may not originate in the rejected claim but must be suggested by the references.

The Applicant appreciates allowance of claims 7 and 8. The central feature in allowing these claims that was not found in the cited art was action of an early activated detector detecting all of the other detectors.

Also the feature of an audial detector array that is CIRCUMFERENTIALLY arranged around the lens distinguishes the applicant's invention from the prior art.

In view of the above, it is believed that all of the claims are in condition for allowance.

Allowance of all remaining claims is earnestly solicited.



Respectfully submitted;

*Robert Samuel Smith*

Robert Samuel Smith, 31,305

I certify that I have placed tis document in an envelope addressed to the Commissioner of Patents.and deposited it as Expres mail with the United States Postal Service. on May 26, 2004



AMENDMENT OF THE SUBSTITUTE SPECIFICATION IN VIEW OF THE  
OFFICE ACTION

Page 11, top of the page

phase difference of the sound wave between a pair of audial detectors 50 and 52, spaced a distance, D, from one another to present on a video monitor 42 an image of an area of a field of view formed by an omnidirectional lens 13 on a CCD array and stored in video memory 40.

Page 12, second paragraph

In another arrangement, the signal selection means includes an array of buttons (switches) on a console 73. Each switch, when closed, connects a selected one of the microphones 62 to a source of power 61 ~~(not shown)~~ enabling the selected microphone 62 to convert sound to an electrical signal for transmission to the monitor coincident with selection of the corresponding section of the field of view for viewing on the monitor. In this arrangement, selection of the ~~microscope~~ microphone occurs simultaneously with the selection of the video signal for viewing corresponding to the selected microphone.

Page 13 first paragraph:

The velocity of sound is C. Then the angle,  $\emptyset$ , of the direction of the sound relative to the audio detector line is

$$\cos \emptyset = PC/D$$

In practice, visual data is stored in the visual memory 40 at addresses corresponding to the angle  $\emptyset$ . The phase detector 51 measures the time period P being the difference in times of arrival of the signal from source S to first audial detector 50 and detector 352. 52 The value of  $\emptyset$ , calculated by the formula gives the address of the image data for generating a local image to be displayed directly on the monitor 42.